



S&H Form: (2/01)
DOCKET NO. 1454.1658

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Mathäus DEJORI et al.

Serial No: 10/563,223

Group Art Unit: 1645

Confirmation No. 1087

Filed: January 4, 2006

Examiner:

For: ANALYSIS OF A REGULATORY GENETIC NETWORK OF A CELL

REQUEST FOR CORRECTED FILING RECEIPT

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

It is requested that the Title on the Official Filing Receipt be corrected. The correct Title is Analysis of a Regulatory Genetic Network of a Cell, as is evidenced by the Preliminary Amendment filed on January 4, 2006, attached to the application as filed. For the convenience of the Patent and Trademark Office, attached is a photocopy of the original receipt on which the errors have been noted in red.

It is requested that a corrected Official Filing Receipt be issued in this application.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 6/5/06

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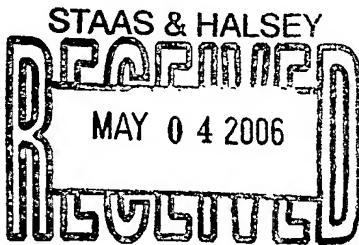


UNITED STATES PATENT AND TRADEMARK OFFICE

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APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY.DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/563,223	01/04/2006	1645	1050	1454.1658	4	23	2

21171
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 WASHINGTON, DC 20005



CONFIRMATION NO. 1087

FILING RECEIPT



OC000000018647771

Date Mailed: 05/01/2006

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

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Power of Attorney: The patent practitioners associated with Customer Number 21171.

Domestic Priority data as claimed by applicant

This application is a 371 of PCT/EP04/51266 06/28/2004

Foreign Applications

GERMANY 103 30 280.8 07/04/2003

If Required, Foreign Filing License Granted: 04/28/2006

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US10/563,223**

Projected Publication Date: 08/10/2006

Non-Publication Request: No

Early Publication Request: No



Title

Method computer program with program code elements and computer program product for analysing a regulatory genetic network of a cell

--Analysis of a Regulatory Genetic Network of a Cell--

Preliminary Class

435

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Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

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For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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Docket No.: 1454.1658

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Mathäus DEJORI et al.

Serial No.

Group Art Unit:

Confirmation No.

Filed: (Concurrently)

Examiner:

For: ANALYSIS OF A REGULATORY GENETIC NETWORK OF A CELL (as amended)

PRELIMINARY AMENDMENT

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Before examination of the above-identified application, please amend the application as follows:

IN THE TITLE:

Please DELETE the Title in its entirety and REPLACE with the following new Title.

– ANALYSIS OF A REGULATORY GENETIC NETWORK OF A CELL –.

Serial No.:

IN THE ABSTRACT:

Please DELETE the Abstract in its entirety and substitute the attached new Abstract.

Serial No.:

IN THE SPECIFICATION:

Please REPLACE the pending specification with the substitute specification attached hereto.

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please CANCEL without prejudice or disclaimer claims 1-24 the underlying PCT application and ADD new claims 25-47 in accordance with the following:

Claims 1-24 (Cancelled)

25. (New) A method for analysis of a regulatory genetic network of a cell using a causal network describing a regulatory genetic network of cells such that nodes of the causal network represent genes of the regulatory genetic network and connectors of the causal networks represent regulatory interactions between the genes of the regulatory genetic network, said method comprising:

providing a predetermined gene expression rate for a selected gene of the regulatory genetic network;

generating a resulting gene expression pattern for the regulatory genetic network using the causal network for the predetermined gene expression rate; and

comparing the resulting gene expression pattern with a predetermined gene expression pattern of the regulatory genetic network.

26. (New) A method in accordance with claim 25, further comprising selecting the selected gene by dependency analysis using the causal network.

27. (New) A method in accordance with claim 26, wherein the predetermined gene expression rate of the selected gene reflects an assumption of a gene defect.

28. (New) A method in accordance with claim 27, wherein the causal network is a Bayesian network.

29. (New) A method in accordance with claim 28, wherein the causal network is a directed acyclic graph type.

30. (New) A method in accordance with claim 29, wherein at least one of the resulting gene expression pattern and the predetermined gene expression pattern represents discrete gene states.

31. (New) A method in accordance with claim 30, wherein the discrete gene states include an overexpressed gene state, a normally expressed gene state and an underexpressed gene state.

32. (New) A method in accordance with claim 31, wherein said comparing of the resulting gene expression pattern to the predetermined gene expression pattern uses at least one of a static method and a statistical code as a measure of distance.

33. (New) A method in accordance with claim 32, further comprising training the causal network using training gene expression patterns to adapt the nodes and the connectors of the causal network.

34. (New) A method in accordance with claim 33, further comprising determining at least one of the predetermined gene expression pattern and the training gene expression patterns using a DNA microarray technique.

35. (New) A method in accordance with claim 34, wherein at least one of the predetermined gene expression pattern and the training gene expression patterns are for a diseased cell.

36. (New) A method in accordance with claim 35, wherein the diseased cell is an oncocell.

37. (New) A method in accordance with claim 36, wherein the diseased cell features an Acute Lymphoblastic Leukemia oncogene.

38. (New) A method in accordance with claim 25, further comprising repeating said determining, said generating and said comparing to determine a plurality of predetermined gene expression rates for selected genes of the regulatory genetic network and to generate and compare the resulting gene expression pattern for each of the predetermined gene expression rates with a corresponding predetermined gene expression pattern.

39. (New) A method in accordance with claim 38, wherein said repeating of the generation the resulting gene expression patterns is performed iteratively.

40. (New) A method in accordance with claim 39, further comprising identifying a dominant gene based on said comparing repeatedly performed.

41. (New) A method in accordance with claim 39, further comprising identifying at least one of a degenerated gene, a mutated gene, a diseased gene, an oncogene, and a tumor-suppressor gene based on said comparing repeatedly performed.

42. (New) A method in accordance with claim 39, further comprising identifying a tumor cell based on said comparing repeatedly performed.

43. (New) A method in accordance with claim 39, further comprising detecting cancer based on said comparing repeatedly performed.

44. (New) A method in accordance with claim 39, further comprising analyzing a cause of an abnormal gene expression pattern/gene expression rate based on said comparing repeatedly performed.

45. (New) A method in accordance with claim 39, further comprising simulating an effect of a medicament based on said comparing repeatedly performed.

46. (New) A method in accordance with claim 39, further comprising analyzing an effect of a medicament based on said comparing repeatedly performed.

47. (New) At least one computer-readable medium storing a program which when executed on a computer causes the computer to perform a method comprising:

- providing a predetermined gene expression rate for a selected gene of the regulatory genetic network;
- generating a resulting gene expression pattern for the regulatory genetic network using the causal network for the predetermined gene expression rate; and
- comparing the generated resulting gene expression pattern with a predetermined gene expression pattern of the regulatory genetic network.

REMARKS

This Preliminary Amendment is submitted to improve the form of the English translation as filed. It is respectfully requested that this Preliminary Amendment be entered in the above-referenced application.

In accordance with the foregoing, claims 1-24 have been canceled and claims 25-47 have been added. Thus, claims 25-48 are pending and are under consideration.

A substitute specification is also being filed herewith. The substitute specification is accompanied by a marked-up copy of the original specification.

If there are any questions regarding these matters, such questions can be addressed by telephone to the undersigned. Otherwise, an early action on the merits is respectfully solicited.

If there are any additional fees associated with filing of this Preliminary Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 1/4/06

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